1   **We Claim:**

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3   1.   A video game system, comprising:

4   a game program executing system executing a game program;

5   one or more controllers supplying user inputs to the game program executing

6   system;

7   an interface between the controllers and the game program executing

8   system, the interface system being programmable to periodically poll the controller

9   without involvement of the game program executing system.

1   *Sub A 10)* 2.   The video game system according to claim 1, wherein the interface is

2   programmable to poll the controllers a predetermined number of times between

3   each vertical blanking interval.

1   3.   The video game system according to claim 1, wherein the interface is

2   programmable to poll the controllers based on a number of video lines.

1   4.   The video game system according to claim 1, wherein the interface

2   polls the status of the controllers

1   5.   The video game system according to claim 4, wherein the status of the

2   controllers includes data indicative of player inputs.

1   *Sub A 11)* 6.   The video game system according to claim 4, wherein the player

2   inputs comprise button presses.

1   7.   The video game system according to claim 4, wherein the player

2   inputs comprise positions of a user manipulable joystick.

1   8.   The video game system according to claim 4, wherein the status of the

2   controllers includes error data.

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1   9.   The video game system according to claim 8, wherein the error data is

2   indicative of no response from a controller in response to a transfer of data thereto.

1   10.   The video game system according to claim 8, wherein the error data is

2   indicative of a data collision.

1   11.   The video game system according to claim 8, wherein the error data is

2   indicative of the game program executing system receiving more than a

3   predetermined amount of data from the controller.

1   12.   The video game system according to claim 8, wherein the error data is

2   indicative of the game program executing system receiving less than a

3   predetermined amount of data from the controller.

1   13.   The video game system according to claim 1, the interface further

2   comprises:

3   a double buffer for storing data transferred between the game program

4   executing system and the controller.

1   14.   The video game system according to claim 13, the interface further

2   comprising:

3   a communication RAM for storing data transferred between the game

4   program executing system and the controller.

1   13 15.   The video game system according to claim 14, the interface further

2   comprising:

3   selectors for selectively connecting the controllers to either the double buffer

4   or the communication RAM.

1   16.   The video game system according to claim 1, the interface

2   comprising:

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3   a modem for pulse width modulating/demodulating data transferred between

4   the game program executing system and the controller.

1   17.   The video game system according to claim 1, the controller including

2   a vibration circuit for vibrating a housing of the controller.

1   18.   The video game system according to claim 1, the controller including

2   a read/write memory.

1   19.   A video game system, comprising:

2   a game program executing system executing a game program;

3   a controller supplying user inputs to the game program executing system;

4   and

5   an interface interfacing between the game program executing system and the

6   controller, the interface including communication circuitry operable in a first mode

7   in which data of a fixed size is communicated between the game program

8   executing system and the controller and in a second mode in which data of variable

9   size is communicated between the game program executing system and the

10   controller.

1   20.   The video game system according to claim 19, the interface further

2   comprising:

3   a communication memory for storing the variable size data.

1   21.   The video game system according to claim 20, the interface further

2   comprising:

3   a double buffer for storing the fixed size data.

1   20 22.   The video game system according to claim 19, the interface further

2   comprising:

3 selectors for selectively connecting the controllers to either the double buffer

4 or the communication RAM.

1 23. The video game system according to claim 19, the interface

2 comprising:

3 a modem for pulse width modulating/demodulating data transferred between

4 the game program executing system and the controller.